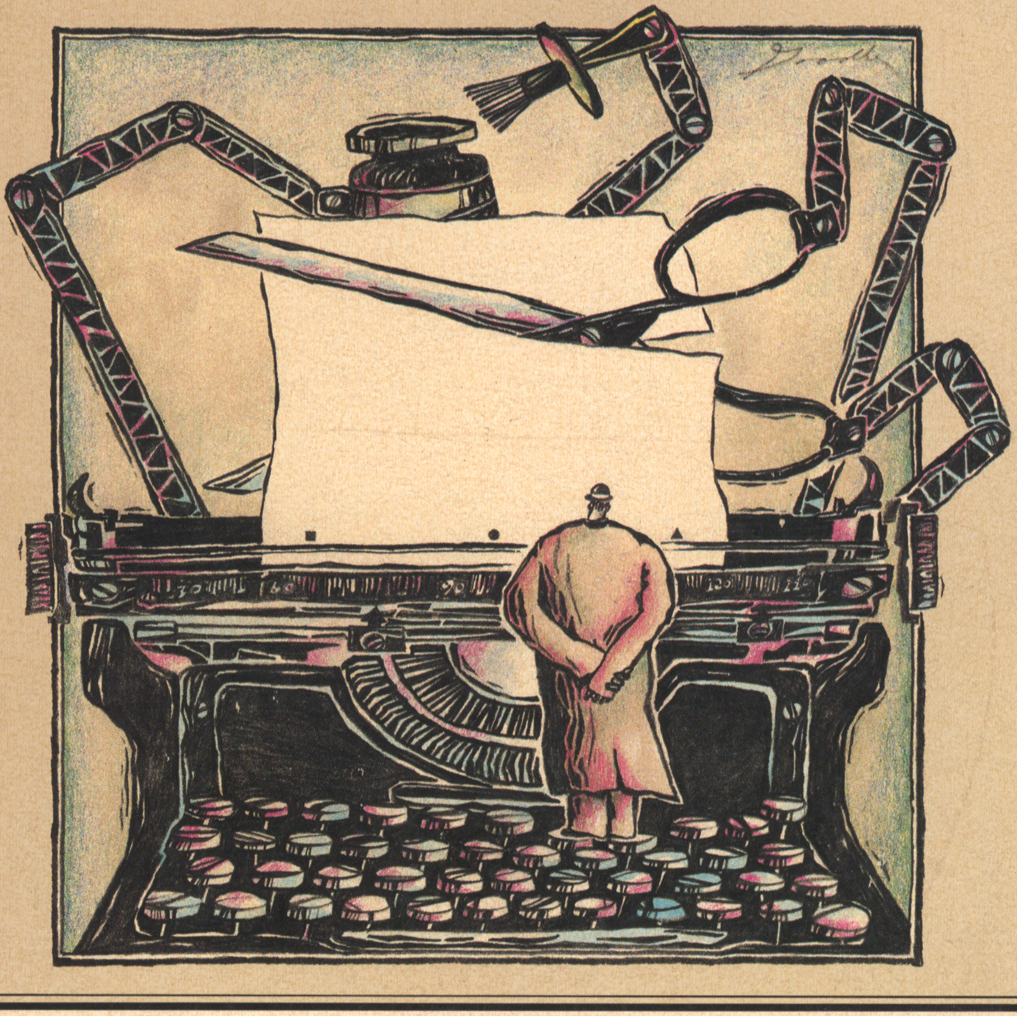
Home management software from Electronic Arts:

Cut & Paste.™

The remarkably simple word processor.

by Tim Mott, Steve Hayes,
Norm Lane, David Maynard, Jerry Morrison,
Steve Shaw and Dan Silva.

Until quite recently we used pens and paper and typewriters to write with, mostly because we knew *how* to use them. They're good tools, but rather slow and cumbersome. You tend to make mistakes with them, and getting rid of those mistakes makes extra work. *Cut & Paste* is an inexpensive and practical alternative. Because you can learn to use it in several minutes, you really *will* use it. And that fact alone may make it the first sensible word processor for the home.



ELECTRONIC ARTS™

The Technology of Words.

Some years ago, a young man employed at the Xerox Corporation became interested in an area of computer design called the user interface. His name was Tim Mott. And the work he and his colleagues did, the style of technology they created, led to the coining of the term "user friendly." CUT & PASTE is an outgrowth of that idea. And while it is a long way from being the first word processor, it may well be the first practical extension of this technology for the home.

THE BIRD IS THE WORD. *Long before computers, man processed his first word with a hieroglyph. A man said the word for bird, scratched a little picture of a bird into a clay tablet, and from thence forth the image of a bird meant, bird.*

MAKING MACHINES FRIENDLY

The idea was that the tasks people perform with computers could be performed in much the same way they had been all along—not with elaborate commands that had to be remembered and that turned "labor saving" into drudgery.

Mott and the people he worked with have some ideas that are quite remarkable. Like most good ideas, they are simple and at the same time lucid. Here are a few of them.

- A computer is a tool.
- Tools are seldom noticed except when they're bad.
- If you want to make a new tool useful, study the way people use the tools they already have.
- New technologies are usually complex. If they get too complex, people will never use them, no matter how much time it might save them.

A related idea was that if a tool had many functions, and there was work involved in remembering how to use them, people would never remember how to use all those functions. Since they never used them, these functions might as well not exist.

These ideas had at least as much bearing on word processing as on other computer operations.

Word processing had, in all incarnations, been way over the complexity threshold of most people. This has something to do with its origin. The first word processors were actually modified program editors—tools computer programmers used in the esoteric task of rewriting their programs.

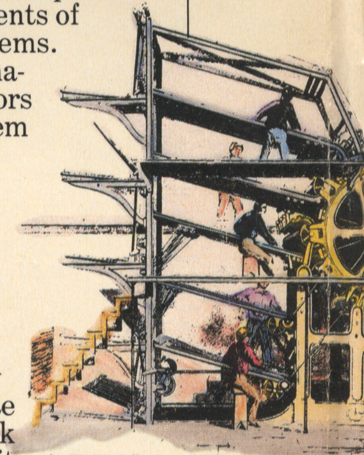
A GENETICALLY CARRIED MISTAKE

The incarnations of word processing have, in fact, been many—very many. First came the systems that were the property of engineers and ran on million-dollar machines that filled whole rooms. Then came dedicated word processing systems for offices, based around sizeable minicomputers. After that came programs you could run on microcomputers—boiled-down equivalents of dedicated office systems.

SWEAT SHOP. *Type was terrific. You could move it around. And once it was locked into place, you could use it to make multiple impressions of the same thing. Fiddling with tiny pieces of metal all day in hot rooms, and then pouring molten lead into the forms, was nasty work. But as was the rule in those days, those who benefited, benefited big.*

But all these incarnations of word processors have carried with them the telltale traces of the program editor.

To put it another way, they have all been based on a tool never intended for use with normal human language, a tool developed by people who didn't write much and didn't think much about the way it was done.



A DINOSAUR. *For the printing of copy, modern dot-matrix printers are markedly more practical than this labor- and space-intensive unit.*

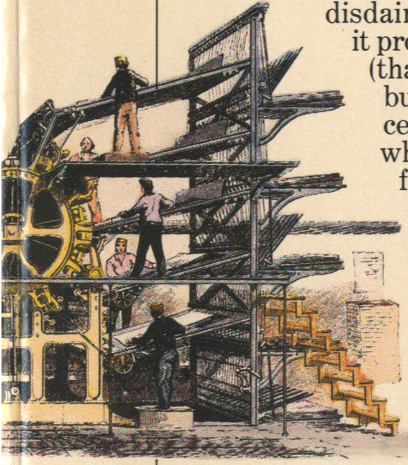
This fact is rather startling.

But it does explain why word processing, which *sounds* so attractive in its ability to eliminate messes and drudgery, has remained so complicated that most people just don't want to be bothered with it.

It is a tool that never becomes transparent. It is a tool that's loaded down with hard-to-remember functions that, as a result, are seldom used.

"Global substitute" was a great feature on a program editor. You could use it to change something in each of its occurrences automatically—and flawlessly. In word processing, though, this feature tended to foul people up. They weren't aware of all the ways they'd used a word or phrase—or all the suffixes they'd affixed—nor were they aware of the mess that would result when the phrase or the root word was changed. Meantime, fatal complexity had been added just to provide them with this opportunity to screw up.

CUTTING THROUGH COMPLEXITY



The excessive complexity, and the disdain and confusion it provokes in people (that we have attributed to word processors in a somewhat exaggerated fashion) has not, however, been universal. In the early half of the 1970's, a handful of people were fortunate enough to work with word processing products Tim Mott designed for specific applications.

He made them very easy to use. Everyone loved them. An elderly lady mastered one in 30 minutes.

The secret lay partly in the ideas Mott helped spawn about tools, about how to make them good, and about complexity, and it also lay partly in a deft avoidance of the pattern of difficulty that had become the word processing heritage.

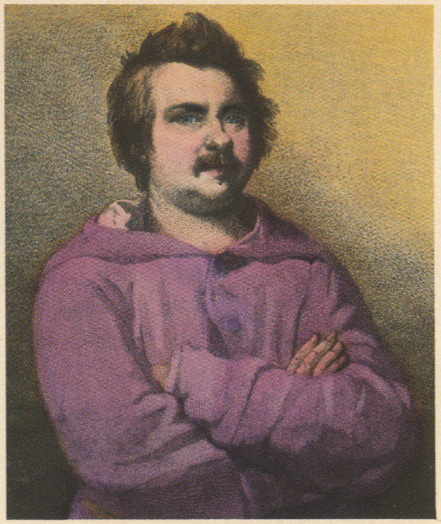
It also lay, though, in the whole way in which "user friendly" products are conceived. As we said, Mott was, along with a Xerox colleague who went on to work on the Apple Lisa®, instrumental in creating the "user friendly" technology.

In order for the operation of the technology to be similar to the operation of tools that preceded it (so that it could be "friendly" to users) the technology would have to studiously avoid the litany of menus, routines, and hierarchies that had become the hallmark of computers. People didn't want to help the computer in its work. They didn't want to know how it worked —they didn't care. It looked nasty in there. All most of them wanted was to get their work done.

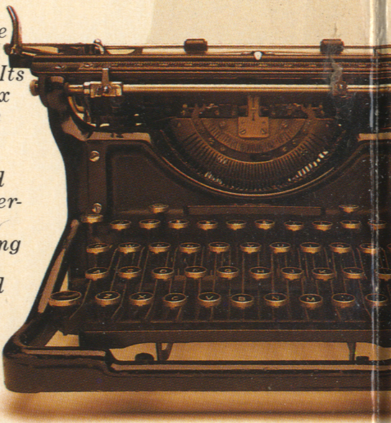
So Mott became a student of the way people work. He began to pay very close attention to the tools and habits involved in office work. And in studying those tools and habits, he formed some unique ideas about how to improve them.

AN "INVISIBLE" DESIGN

Then he and his colleagues worked on making the computer seem to act like the other tools they'd been using. Of course, it didn't *really* act like them. The creation of an invisible design, a tool that does its work inconspicuously, meant devising elaborate computer procedures just to make it *seem* to act like something it wasn't.



WORD PROCESSING, ONCE AGAIN, IS INVENTED. *Honoré de Balzac, the great French novelist, invented word processing about 1830. Although moveable type had existed for nearly 400 years, not until Balzac did anyone figure out how useful this could be in composition. He was the first man to effect massive revisions while writing was "in type." He never touched his writing until it was. Draft 1 went straight off to the unfortunate typesetters. Often lines did have to be reset, but basically, words and lines were moved around, and new proofs had to be pulled and typesetters patted on the back, and that was about it.*



"THE AXE." *The typewriter is a child of the machine age. Its marvelously complex linkages allowed the illegible to become legible, speeded up correspondence, and standardized interpersonal written communication. Using today's terminology, the typewriter could perhaps best be described as a "personal printer." Nevertheless, some writers stubbornly refer to it as "The Axe."*

All this sounds messy and, ugh, complicated. But the beauty of it was that, once it was properly achieved, it was neither messy nor complicated. It was seamless and smooth—streamlined. In computer parlance, it was sexy.

Once Mott joined Electronic Arts, he decided to build a word processing program for the public —for use in the home, on small computers.

Then came the hard part. Tim assembled a very remarkable group of designers and engineers. He convinced them that his idea had merit, and led them to believe that they actually could make a great product out of it.

This was what is euphemistically referred to as a "group effort." What that means is that seven intelligent grown men gave themselves up to a thinly disguised kind of chaos. Roles formed and people found themselves in them as the work progressed. Distinctions between day and night evaporated. Aberrant forms of behavior became commonplace. And at some point in the process which will con-

Lisa is a registered trademark of Apple Computer, Inc.

tinue until the ink is dry on this package, CUT & PASTE became a real thing.

These men have, happily, survived the experience and deserve a large measure of credit and/or blame for the thing they brought to life. They are: David Maynard, who designed and wrote the code for the user interface, menus, messages and the prompts; Norm Lane, who crafted the display and window management code; Steve Shaw, who helped write and maintain the underlying language and system support; Dan Silva, who puzzled though a particularly clever approach to text editing and formatting code; and Steve Hayes and Jerry Morrison, writers of the code that ties all of the above together into a coherent word processor. There was, of course, considerable overlap in these efforts. But knowing that, it is probably more important to make a point about precisely how the unusual simplicity of CUT & PASTE was achieved.

EDITING A LA MODELESS

To descend into detail one final time, CUT & PASTE was designed to utilize "modeless editing." This meant that you would not, as in previous word processors, have to think about an operation you wished to perform before performing it. You would not find yourself starting to do something, then discovering it was impossible because it wasn't part of the "mode" you were in. This problem has loomed large, along with all the others, in existing word processors.

CAPTAINS OF THE ELECTRONIC AGE. *The Linotype machine pictured here was invented by the redoubtable Otto Mergenthaler in the late 19th century. The device was the first to automate the typesetting process, and its contribution to printing and word processing was the greatest thing since Gutenberg. Seated at the console of this monster is Tim Mott. Standing around it, from left to right, are Norm Lane, Steve Shaw, David Maynard, Dan Silva, Steve Hayes, and Jerry Morrison, whose contribution to the ongoing improvement of word processing will await the judgment of history.*

CUT & PASTE stands right where it should in relation to the complexity threshold. You can use it. It is not an industrial-strength word processor with the attendant complexities and long learning-in cycle. It is instead a remarkably simple word processor you can use in place of other things.

In the past, we have used pens and pencils and typewriters, mostly because we knew *how* to use them. They're nice tools—very straightforward. They're elegant—but limited. You tend to make a mess when you work with them, and getting rid of the mess takes extra work.

The things word processors were designed to help avoid, it should be possible to avoid.

With CUT & PASTE, it is.

Spend about twenty minutes fiddling with it. Then start writing.

You'll never stop.

AND FINALLY *...The whole way words were processed changed when the computer was invented. After the machines that took up whole buildings, computers got smaller, and little babies like this are now all over the place.*

THE MIGHTY QUILL.

In its day, the pen was considered to be a revolutionary advancement in word processing technology. It was a lot more practical to use than the tiny-headed chisels with which the Egyptians and their contemporaries scratched words into clay. The advent of paper made the storing and retrieval of documents enormously easier, and these new technologies had much to do with the spread of literacy in early times. Even so, literacy remained the property of the very few, and the ability to form letters was the property of the even fewer. Those that could write, however, wrote very well. And for centuries, scribes acted much as human typewriters. Today the pen is still in use. For portability, cost-effectiveness, and sheer elegance in forming letters, it's hard to beat.

Cut & Paste was designed, developed and programmed by
Tim Mott, Steve Hayes, Norm Lane, David Maynard, Jerry Morrison, Steve Shaw and **Dan Silva.**
Package design and creative direction by **Goodby, Berlin & Silverstein.** Typographic design
by **Al Fessler.** Linernotes by **Steve Emerson.** Photography by **Ed Zak.** Produced by **Pat Marriott.**

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How it works.

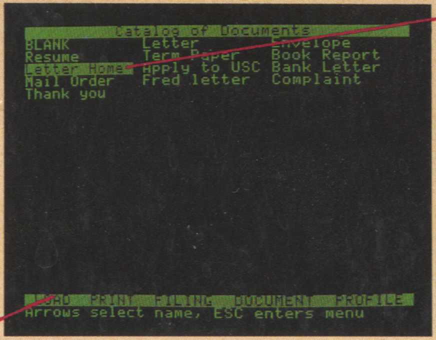
Getting started with Cut & Paste is like getting started with a new typewriter. There are no elaborate commands to memorize, no arduous procedures to master before you can actually write with it. There is, instead, the pure, simple functionality of an elegant tool.

DOING THINGS.

Want to load something? Position the cursor on "LOAD." Or maybe you're ready to print what you've written, in which case you move the cursor to "PRINT."

YOUR ROUGH DRAFT.

You've typed it in. You look it over. You think, "Maybe I've been a little too blunt." Fine. You put the cursor on the line you want deleted, stretching it out over the entire sentence (you can do that). Then you move the cursor down to "CUT." It is cut now. Gone.



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             Catalog of Documents
BLANK        Letter        Envelope
Resume       Term Paper    Book Report
Letter Home  Apply to USC  Bank Letter
Mail Order   Fred letter   Complaint
Thank you




LOAD  PRINT  FILING  DOCUMENT  PROFILE
Arrows select name, ESC enters menu
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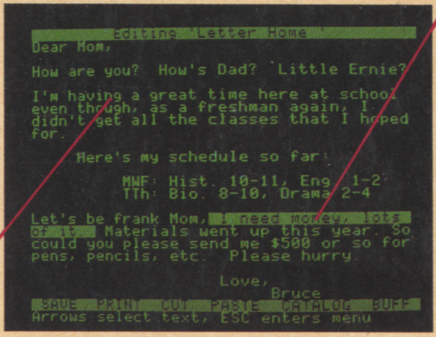

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            Editing 'Letter Home'
Dear Mom,

How are you?  How's Dad?  Little Ernie?

I'm having a great time here at school
even though, as a freshman again, I
didn't get all the classes that I hoped
for.

    Here's my schedule so far:

        MWF: Hist. 10-11, Eng. 1-2
        TTh: Bio. 8-10, Drama 2-4

Let's be frank Mom, I need money, lots
of it. Materials went up this year. So
could you please send me $500 or so for
pens, pencils, etc.  Please hurry.

                 Love,
                      Bruce
SAVE  PRINT  CUT  PASTE  CATALOG  BUFF
Arrows select text, ESC enters menu
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CUT AND PASTE displays its commands on a single line at the bottom of the screen. This makes working with it easier and also gives you more usable space on the screen.

ELECTRONIC ARTS™

GRAB A DOCUMENT.

Very simple, this. You use your cursor keys (the ones with the little arrows on them) to move this bright block over the file name you want to get. Done. And if you want to create a new document, you just put the block over a blank and type in the file name. See?

OOPS.

Let's say you've cut a line and decide you want to put it back into your text, only in a different place. Easy. You send that cursor over to the spot where you want the line to reappear. Then select "PASTE" at the bottom of the screen. Ah. Much better now.

SOME KEY FEATURES.

Scrolling dynamic menus • Automatic word wrap • Cut & paste editing • Block indenting • Set margins and page size in inches • Tabs • Automatic page numbering • Controllable page breaks • Headings • Scrolling text window • Automatic widow and orphan control • Built-in formats for pages • Clear and concise manual.

HOME MANAGEMENT SOFTWARE FROM ELECTRONIC ARTS. Cut & Paste is just one of a growing number of products we're publishing under the category of "home mangement software." These products are all built around the same basic program design, which makes them all equally "friendly," as well as remarkably straightforward and practical. We believe that designs like these will soon make home computers as functionally efficient as today's basic appliances. If you'd like to find out more about what we've planned for the future, write us at: Electronic Arts, 2755 Campus Drive, San Mateo, CA 94403.

Electronic Arts provides a limited ninety day warranty on the recording media. See limited warranty statement enclosed. The warranty does not apply to the software programs themselves, which are provided AS IS.